

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: )  
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Craig D. YARDLEY et al. ) Group Art Unit: 3721  
 )  
Application No.: 10/689,379 ) Examiner: Christopher R. HARMON  
 )  
Filed: October 20,2003 )  
 )  
For: SINGLE-PLY DISPENSER NAPKIN ) Confirmation No.: 3363

**MAIL STOP APPEAL BRIEF — PATENTS**

**VIA EFS-Web**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

This is an appeal to the Board of Patent Appeals and Interferences (“the Board”) from the Final Office Action dated March 28, 2007, finally rejecting claims 80-90 in the above-identified patent application. The appealed claims, as rejected, are set forth in the attached Appendix VIII.

On May 16, 2007, Appellant filed a Notice of Appeal along with a Pre-Appeal Brief Request for Review. On June 6, 2007, the Office mailed a Notice of Panel Decision from Pre-Appeal Brief Review, stating that Appellant should proceed to the Board “because there is at least one actual issue for appeal.” Therefore, in support of the Notice of Appeal filed May 16, 2007, and pursuant to 37 C.F.R. § 41.37 Appellant presents this Appeal Brief and submits the required fee of \$510.00 under 37 C.F.R. § 41.20(b) herewith using the EFS-RAM system.

The Notice of Appeal was filed on May 16, 2007. Further to the Petition for Extension of Time for five (5) months filed concurrently herewith, the time for filing this Appeal Brief was extended to December 16, 2007. By operation of 35 U.S.C. § 21(b), because December 16 was a Sunday, this Appeal Brief is timely filed on Monday, December 17, 2007.

If any further extensions of time or fees are required, Appellant requests that they be granted and/or be charged to our Deposit Account No. 06-0916.

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**I. Real Party in Interest**

The real party in interest is Georgia-Pacific Consumer Products LP, who is the assignee of record as reflected in the assignment recorded in related U.S. Patent Application No. 09/049,103 (now U.S. Patent No. 6,306,480) on February 14, 2007, at Reel 018883 and Frame 0781. Georgia-Pacific Consumer Products LP is an indirect, wholly-owned subsidiary of Koch Industries, Inc.

**II. Related Appeals and Interferences**

Appellant's undersigned legal representative knows of no other appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

**III. Status of Claims**

Claims 80-90 are pending in this application. No claims have been withdrawn from consideration. Claims 80-90 have been finally rejected and are appealed.

**IV. Status of Amendments**

All amendments have been entered. No amendments have been filed subsequent to the Final Office Action dated March 28, 2007.

**V. Summary of Claimed Subject Matter**

The present application, as reflected in part by independent claims 80 and 84, is generally directed to methods for making an elongated single-ply paper napkin that achieves good absorbency, strength, hand feel, and softness and which is less expensive to make than traditional napkin products. See specification at 1:2-10.<sup>1</sup> The methods may reduce cost in terms of man-hours, machine-time, and starting materials, as well as may increase the speed of production and production control. *Id.*

In one embodiment, illustrated for example by independent claim 80, the described methods include making a single-ply paper napkin having a machine direction and a cross machine direction, wherein the longitudinal dimension is in the machine direction and the transverse dimension is in the cross-machine direction, and wherein the longitudinal dimension is about two times the transverse dimension. The method further includes folding one transverse free edge of the single-ply paper web toward the other transverse free edge to create at least one transverse fold that is in the machine direction, with no longitudinal folds in the cross-machine direction. See, e.g., *id.* at 3:15 to 4:5; 27:6 to 28:11.

It is believed that single-ply napkins without longitudinal folds in the cross-machine direction have several advantages over prior art napkins with longitudinal folds in the cross-machine direction. First, a lack of longitudinal folds may help solve some, if not many, of the packaging problems associated with prior art napkins. Second, napkins without longitudinal folds may be more economical to manufacture than multi-

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<sup>1</sup> Appellant uses the notation “page:line(s)” or “column:line(s)” to refer to the cited portion of a reference.



ply napkins or single-ply napkins having longitudinal folds in the cross-machine direction. Finally, napkins without longitudinal folds may also be advantageous because the amount of web material used, and thus total napkin size and weight, is reduced as compared to the conventional, prior art configurations.

In another embodiment, illustrated for example by independent claim 84, the described methods include making a single-ply paper napkin having a machine direction and a cross machine direction, wherein the longitudinal dimension is in the machine direction and the transverse dimension is in the cross-machine direction, and wherein the longitudinal dimension is about two times the transverse dimension. The method further includes folding one transverse free edge of the single-ply paper web toward the other transverse free edge to create at least one transverse fold that is in the machine direction, and subsequently folding the first transverse fold line towards the transverse edge to create at least one additional transverse fold line on the single-ply paper web, wherein the napkin contains no longitudinal folds in the cross-machine direction. *See, e.g., id.* at 3:15 to 4:5; 27:6 to 28:11; and 29:3-6.

Other embodiments and attributes may be present in the claimed methods and the products that result therefrom. In one embodiment, the folded web has two panels of approximately equal areas. *See id.* at 28:12-16. In another embodiment, three or four panels are formed on the single-ply paper web. *See id.* at 29:7-12; 29:14-30:2. In a further embodiment, the methods may make a single-ply napkin web having a basis weight of at least about 16 pounds/3000ft<sup>2</sup> ream and wherein the longitudinal dimension ranges from about 9½ inches to about 13½ inches. *Id.* at 10:4-6. In yet another embodiment, the methods may make a single-ply napkin web having a basis weight of

at least about 16 pounds/3000ft<sup>2</sup> ream and wherein the longitudinal dimension ranges from about 11<sup>1</sup>/<sub>2</sub> inches to about 17<sup>1</sup>/<sub>2</sub> inches. *Id.* at 10:16-11:2.

**VI. Grounds of Rejection to Be Reviewed on Appeal**

The following five issues or grounds of rejection are to be reviewed on appeal:

1. Whether the claim recitation “of at least about,” as used in each of independent claims 80 and 84 and dependent claims 82 and 87, is indefinite under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter that Appellant regards as the invention.
2. Whether method claims 80, 81, 84, 86, and 90 are anticipated under 35 U.S.C. § 102(b) over U.S. Patent No. 1,256,334 to Lazar (“Lazar”).
3. Whether claims 84, 85, and 88 are anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 5,716,691 to Chan (“Chan”).
4. Whether method claims 82, 83, and 87 are obvious under 35 U.S.C. § 103(a) over Lazar in view of Appellant’s alleged admitted prior art.
5. Whether claims 84, 85, 88, and 89 are obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 4,469,243 to Ito (“Ito”).

There are no other rejections of any pending claim in this application. There are no other references of record besides Lazar, Chan, and Ito that are cited as the basis for the rejections.

Each claim of this patent application is separately patentable and, upon issuance, will be entitled to a separate presumption of validity under 35 U.S.C. § 282. Solely for convenience in handling during this proceeding, however, Appellant asserts that the appealed claims do not all stand or fall together and have grouped the appealed claims into the following two groups accordingly.

Group I - Claims 80-83: Recite methods of making a paper napkin comprising, *inter alia*, at least one transverse fold and no longitudinal folds. This group is argued with respect to the anticipation rejection under 35 U.S.C. § 102(b) over Lazar and the obviousness rejection under 35 U.S.C. § 103(a) over Lazar in view of Appellant's supposed admitted prior art.

Group II - Claims 84-90: Recite methods of making a paper napkin comprising, *inter alia*, at least two transverse folds and no longitudinal folds. This group is argued over the anticipation rejections under 35 U.S.C. § 102(b) over Lazar and Chan, as well as the obviousness rejections under 35 U.S.C. § 103(a) over Lazar in view of Appellant's supposed admitted prior art and over Ito.

## VII. Argument

With the prevalence of fast food and other quick service establishments, single-use dispenser napkins have become widely used. Single-use napkins are highly desirable because they may be readily dispensed and are strong and sanitary. The folds of the napkin play a particularly important role in dispensing and are intended to enable a napkin to be contained in a reasonably sized dispenser, to reinforce the napkin to make it strong enough to resist tearing or tabbing during the dispensing process, and also to facilitate the removal of individual napkins from the dispenser. Of the variety of napkin configurations on the market at the time this application was filed, many of them were relatively expensive to produce and resulted in undesirable properties such as low or non-uniform strength, poor dispensability, and poor transportability. Some were two-ply napkins, leading to increased costs. Others were single-ply napkins folded in several directions to try and replicate the strength and look of a two-ply napkin.

The present inventors wanted to achieve a new fold configuration that would maximize consumer attributes while also decreasing manufacturing and transportation costs. They developed the claimed methods of making a single-ply napkin that contains, *inter alia*, at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction. Those noted recitations—longitudinal and transverse dimension, and machine and cross-machine direction—orient the paper web in the recited process in terms well-understood to those of ordinary skill in the art of papermaking. That orientation in the recited process is not taught by the prior art.

To be sure, a napkin having no longitudinal folds in the cross-machine direction is not a mere design choice, but rather is an important part of the invention, as it

provides significant but unexpected advantages that are explained at length in the application. For example, as explained in further detail below, a lack of longitudinal folds in the cross-machine direction may allow a napkin forming machine to achieve increases in efficiency, resulting in faster throughput speeds, because the paper web does not have to be turned for folding in both the longitudinal and transverse directions. The napkin may also be able to maintain substantially uniform thickness and strength, yielding better dispensability and transportability, due to the lack of longitudinal folds. And the use of only a single-ply decreases manufacturing and transportation costs.

During examination the Office has not asserted that any prior art reference teaches such a unique folding method for a single-ply napkin product. Yet the Office predicates its rejections for indefiniteness, anticipation, and obviousness on the belief that the pending claims are indefinite because they do not properly distinguish “machine direction” from “cross-machine direction.” Thus, the Office has not considered those recitations when assessing patentability. See Final Office Action dated March 28, 2007, at § 9. Yet “machine-direction” and “cross-machine direction,” as used in the instant specification and in the pending claims, are clearly definite. Neither the MPEP, nor the case law, nor any understanding of the skilled artisan points to any ambiguity in Appellant’s use of those well-defined terms.

The clear and unambiguous meaning of “machine-direction” and “cross-machine direction,” in combination with the remainder of the recitations in the pending claims, clearly distinguishes the pending claims over the cited references. As discussed in further detail below, Appellant believes the rejections should be withdrawn and respectfully requests that this application be passed to grant.

**A. Rejection Under 35 U.S.C. § 112, Second Paragraph**

Claims 80-90 (in Groups I and II) have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter that the Appellant regards as the invention. See Final Office Action dated March 28, 2007, at § 2. In particular, the Office asserts that the scope of the limitation “at least about,” as used in independent claims 80 and 84 and dependent claims 82 and 87, is unclear. *Id.* Claim 80 is representative of the rejected claims (emphasis added):

A method of making a paper napkin comprising:

(a) providing a single-ply paper web having a machine direction and a cross machine direction, wherein a longitudinal dimension is in the machine direction and a transverse dimension is in the cross-machine direction, and wherein the longitudinal dimension is at least about two times the transverse dimension;

(b) optionally orienting the web for longitudinal folding in the machine direction; and

(c) folding one transverse free edge of the single-ply paper web toward the other transverse free edge to create two panels in the single-ply paper web;

wherein the napkin contains no longitudinal fold and at least one transverse fold.

The Office appears to believe that, because the specification uses the term “about” to describe particular examples of ranges for the longitudinal and transverse dimensions that may come within the scope of the claims, the additional use of the term “about” in the claims themselves creates uncertainty as to what scope or degree is encompassed by the claims. See Final Office Action dated March 28, 2007, at § 9 (“Because the ranges are not specific i.e. the claimed ranges (also provided for in the

specification) include the term “about”, it is uncertain to what degree is encompassed.”). In support of that assertion, the Office has cited MPEP § 2173.05(b) and, in particular, *Amgen, Inc. v. Chugai Pharm. Co. Ltd.*, 927 F.2d 1200, 18 U.S.P.Q. 1016 (Fed Cir. 1991) (“*Amgen*”) discussed therein. *Id.* The Office further states that “*Amgen* is on point due to the undetermined ranges of error included in the calculation, due to the multiple uses of the term ‘about’.” *Id.*

Appellant respectfully disagrees with the Office rejection and asserts that the term “about” is not inherently ambiguous, at least because (1) the claim recitations of “machine direction,” “cross-machine direction,” “longitudinal dimension,” and “transverse dimension” are themselves clear and definite; (2) neither the MPEP nor *Amgen* support the assertion that “about” is ambiguous as used in the pending claims, and (2) the specification’s use of the term “about” to describe exemplary ranges does not make the claims’ use of “about” ambiguous.

**1. “Machine Direction” and “Cross-Machine Direction” Are Inherent Properties of Any Web Formed on a Paper Making Machine**

As an initial matter, the Office has asserted that a machine direction and a cross-machine direction are not necessarily inherent properties of paper napkins formed on a paper-making machine. See Final Office Action dated March 28, 2007, at § 9. However, as the instant specification reveals, and as is readily known to one of ordinary skill in the art, any paper web that is formed on a paper-making machine inherently possesses a machine direction and cross-machine direction, regardless of whether the web is subsequently folded by a folding machine.



The term paper “web” usually denotes a continuous sheet or roll of paper manufactured or undergoing manufacture on a paper machine.<sup>2</sup> The machine itself has a “direction”—the path the paper web travels as it is formed. The machine also has a “cross direction”—the axis that is 90° from the machine direction. Since webs are generally formed in a continuous fashion, the machine direction is readily identifiable because the web is longer in that direction than the cross-machine direction and is generally wound in a roll in that direction as it is formed. The orientation of a web created on the paper machine is, thus, often and as a matter of standard practice defined by the machine direction and cross-machine direction.

Moreover, many paper webs are “sided” and have different properties in the machine direction than the cross-machine direction, in part due to the arrangement of cellulosic fibers in the paper-making process. In particular, the conventional formation of a paper web on a paper-making machine typically includes the step of depositing a fibrous slurry of paper making fibers onto a forming structure such as a twin wire former or a crescent former. See specification at 17:10-14. The way in which those fibers are deposited on the forming structure and then dried to form a paper web may result in a particular orientation of the paper making fibers within the web, and may also result in different properties across the two orientations of that web (machine direction versus cross-machine direction). For instance, the web may possess a tensile strength that varies between the machine and cross-machine directions. The instant specification

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<sup>2</sup> See, e.g., Marriam-Webster Online Dictionary, “Web” ([www.m-w.com/dictionary/web](http://www.m-w.com/dictionary/web)); American Heritage Dictionary, “Web” ([www.bartleby.com/61/42/W0074200.html](http://www.bartleby.com/61/42/W0074200.html)) (“14. A large continuous roll of paper, such as newsprint, either in the process of manufacture or as it is fed into a web press”).

discloses that, in some embodiments, webs made according to the disclosed methods may possess a ratio of machine direction tensile strength to cross-machine direction tensile strength that ranges from between about 1 to about 4. *Id.* at 26:11 to 27:5.

Notably, the discussion of the ratio of the machine direction tensile strength to the cross-machine tensile strength appears in the portion of the specification describing the formation of the paper web—not in the portion of the specification describing the subsequent folding of the paper web. However, the Office seems to confuse this point and actually appears to cite that portion of the specification for the assertion that not all paper webs inherently have a machine and a cross-machine direction. The Office appears to believe that the specification's disclosure that the ratio of the machine direction tensile strength to the cross-machine tensile strength may be 1, shows that the two orientations do not exist. See Final Office Action dated March 28, 2007, at § 9. Yet equal tensile strength does not mean that a web lacks machine and cross-machine directions. Instead, the specification explicitly indicates that, even though the ratio of tensile strengths may be equal or nearly equal, both directions still exist. Specification at 27:1-5 (“In this embodiment, because the machine direction and the cross-machine direction tensile strength are almost the same, the web is close to “square.”). The definition of certain web attributes as in the machine direction and in the cross-machine direction underscores the propriety and definiteness of those terms in the claims.

**2. Given the Definiteness of Machine and Cross-Machine Direction, the Recitations of Longitudinal and Transverse Dimensions Are Also Definite**

The Office also mistakenly seems to believe that the machine direction and the cross machine may relate to the transport direction on a paper folding machine instead

of the transport direction on the paper-making machine. See Final Office Action dated March 28, 2007, at § 9. However, as noted above and indicated throughout the specification, the skilled artisan would readily know that the machine direction and cross machine direction refer to the transport direction on the paper-making machine and not the transport direction on the folding machine.

A paper web formed on a paper-making machine inherently contains a machine direction and a cross-machine direction, regardless of whether or not the paper web is then subsequently folded, as discussed in the specification: “Depending on the orientation of the single-ply web upon cutting of the individual napkin substrates, the transverse fold can run parallel to either the machine direction or the cross-machine direction of the web.” 27:16 to 28:1. That passage demonstrates that the web contains a machine direction and a cross-machine direction upon its formation, and that folding may then subsequently occur in either of those directions depending on how the web is oriented for folding. For that reason, among others, the pending claims recite that “a longitudinal dimension is in the machine direction and a transverse dimension is in the cross-machine direction,” to eliminate any ambiguity in the recitations for folding of the single-ply paper napkin. Those dimensions are based on definite terms and nothing in the specification or the claims creates any indefiniteness for those recitations.

**3. The Specification’s Use of “About” to Describe Exemplary Ranges Not Create Indefiniteness in the Pending Claims**

Numeric values for the paper web lengths in the longitudinal dimension and the transverse dimension can be readily ascertained. The pending claims simply recite “a longitudinal dimension” and “a transverse dimension.” The skilled artisan would readily

be able to determine the magnitude of those dimensions, e.g., by measuring their length. The measurement can be done in many different ways readily known to the skilled artisan, including but not limited to a simple tape measure or a more complex laser, high-precision laser measurement sensor. The specification itself also indicates how to perform the measurement: “The longitudinal and transverse dimension[s] of the web are measured from one free edge of the web to the other parallel free edge.” 27:10-11. The pending claims then merely recite that the “longitudinal dimension is at least about two times the transverse dimension.”

Comparing the two measured dimension values, and determining whether the longitudinal value is at least about two times the transverse value, is easily within the abilities of the skilled artisan, such that the scope of the claims can be readily assessed. For example, Table 1 of the specification shows an exemplary napkin according to pending claims called “SuperServ” with a length (longitudinal dimension) of 17 inches and a width (transverse dimension) of 6.5 inches. Since 17 is greater than  $6.5 \times 2$ , the SuperServ napkin has a longitudinal dimension that is clearly “at least about two times” the transverse dimension. There simply is no indefiniteness or ambiguity inherent in Appellant’s use of “about” in the pending claims.

That the specification uses the word “about” when disclosing exemplary values for those two recited lengths does not change the result, as the language of the claims themselves are unambiguous and definite. See MPEP § 2173.05; *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1557, 220 U.S.P.Q. 303, 316 (Fed. Cir. 1983) (“Distinguishing what infringes from what doesn’t is the role of the claims, not of the specification.”). Building on the above example for the SuperServ napkin, if the length

was “about” 17 inches and the width was “about” 6.5 inches, the longitudinal dimension would still be “at least about two times” the transverse dimension. Basing the claimed ratio on non-exact values does not create any indefiniteness under 35 U.S.C. § 112 ¶ 2.

In addition, the Examiner appears to also allege that the claims are indefinite because twice the smallest exemplary transverse dimension mentioned in the specification (3 inches x 2 = 6 inches) may not equal “at least about” 9.5 inches, the smallest exemplary longitudinal dimension mentioned in the specification. See Final Office Action dated March 28, 2007, at §9. However, that position is not proper.

First, Appellant is not restricted to claim only examples from the specification. See *Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1303, 41 U.S.P.Q.2d 1364, 1367 (Fed. Cir. 1997) (“While examples disclosed in the preferred embodiment may aid in the proper interpretation of a claim term, the scope of a claim is not necessarily limited by such examples.”). All that is required by § 112 is that the disclosure allow those skilled in the art to practice the claimed invention without undue experimentation. The portion of the specification to which the Examiner points for the multiple usage of the term “about” (28:12 to 29:2) recites that, “in one preferred embodiment . . . the length of the single-ply web . . . preferably [ranges] from about 9½ inches to about 13 inches . . . [and] the width of the web ranges from about 3 to 7 inches.” That one value of one embodiment in portion of the specification may not completely fall within the scope of the pending claims does not act to limit the claim scope or indicate that the claims are indefinite. Although it need not necessarily need to be the case, dependent claims 82 and 87, which recite that the paper web “has a longitudinal dimension ranging from about 9½ inches to about 13½ inches,” also create transverse dimensions according to

the claimed ratio that fall within the disclosed range noted by the Office (about 4.75 to about 6.75 is within “about 3 to 7 inches”).

Second, the recited ratio in the pending independent claims 80 and 84 (“at least about two times”) is itself wholly enabled and described, and separately supported from the individual dimensions mentioned in the specification and noted by the Office. In particular, support for the claimed ratio exists in the original specification:

It is also an object of the present invention to provide a method for the production of a paper napkin comprising providing a single-ply paper web having a longitudinal dimension and a transverse dimension, wherein the single-ply paper web has a longitudinal-to-transverse aspect ratio of at least about 2 to 1; and folding one transverse free edge of the single-ply paper web toward the other transverse free edge to create two panels in the single-ply paper web.

14:10-15; see *also* original claims 80 and 84.

In all, nothing in the specification or the claims creates any ambiguity or indefiniteness in the recitation of “wherein the longitudinal dimension is at least about two times the transverse dimension.” That calculation is readily ascertainable and has a clear and reasonable meaning to the skilled artisan, such that the rejection under 35 U.S.C. § 112, second paragraph, should not stand.

#### **4. Amgen Does Not Support the Office’s Assertion of Ambiguity**

The term “about” is also not a term of inherent ambiguity, particularly in the mechanical arts of the present invention, and does not by itself render the pending claims indefinite. And in contrast to the Office’s assertion, both MPEP § 2173.05(b) and the *Amgen* case actually support Appellant’s position as to the definiteness of the term in the context of the pending claims.

In *Amgen*, the challenged patent recited claim language that limited the “specific activity” to “at least about 160,000.” 927 F.2d at 1217, 18 U.S.P.Q.2d at 1019. The district court found that bioassaying, the only available method for measuring specific activity, was itself “an imprecise form of measurement with a range of error” and that the use of the term “about,” “coupled with the range of error already inherent in the specific activity limitation,” created ambiguity. *Id.* The court also found that the patentee had introduced the term “about” into the claims late in the prosecution process and in an attempt to recapture some ambiguous scope that lay in between claims that had already been allowed and scope previously relinquished in overcoming a prior art reference. *Id.* at 1217-1218, 18 U.S.P.Q.2d at 1030-1031. The Federal Circuit found that, in view of the specific facts in that case, the combination of those two factors rendered the term “about” indefinite. However, the court explicitly stated that “we caution that our holding that the term ‘about’ renders indefinite claims 4 and 6 should not be understood as ruling out any and all uses of this term in patent claims. It may be acceptable in appropriate fact situations . . . even though it is not here.” *Id.*

The pending claims of this application are exactly such a fact situation in which use of the term “about” is appropriate and not indefinite. Unlike bioassaying, the measurement of the ratio of the longitudinal dimension to the transverse dimension is neither inherently imprecise nor contains an inherent range of error, but is merely a ratio of readily measurable lengths. As such, the measurement of the ratio those two lengths may be precise, exacting, and well understood by the skilled artisan. Anything from a cut piece of string, to a standard elementary school ruler, to a high-precision laser measurement sensor—coupled with simple mathematical division—can determine the

recited ratio. That the ratio itself is “about” a number is of no consequence and does not dilute or create any ambiguity in the underlying measurements.<sup>3</sup> In addition, Appellant has not introduced the term “about” into the claims in an effort to regain any subject matter that had previously been relinquished; the term is in the specification and was in the claims as originally presented. Therefore, *Amgen* does not suggest that Appellant’s use of the term “about” in the present claims is indefinite.

That conclusion is also supported by the two other cases cited in MPEP § 2173.05(b). In *Ex Parte Eastwood*, the term “about” was found to be “clear but flexible” and “deemed to be similar in meaning to terms such as ‘approximately’ or ‘nearly.’” 163 U.S.P.Q. 316, 317 (B.P.A.I. 1968). Similarly, in *Gore*, the Federal Circuit held that a limitation defining the stretch rate of a plastic as “exceeding about 10% per second” definite because infringement could clearly be assessed through the use of a stopwatch. 721 F.2d at 1557, 220 U.S.P.Q. at 315. Like in *Gore*, and unlike in *Amgen*, the variable modified by the term “about” in the instant claims may also be clearly assessed and measured. The measurement of the ratio of two lengths may be precise and exact and does not contain an inherent range of error. *Gore*, not *Amgen*, controls in this situation and the Office’s rejection with regards to the term “about” in the pending claims should be withdrawn.

Quite simply, the use of the word “about” in describing the claimed ratio of longitudinal dimension to transverse dimension is sufficiently definite for purposes of 35 U.S.C. § 112, second paragraph. The rejection should be withdrawn in its entirety.

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<sup>3</sup> To be sure, the Office has issued U.S. Patents with claims reciting “about” a ratio of measured values. See, e.g., U.S. Patent Nos. 6,200,418; 6,287,422; and 6,372,087.



**B. Rejections under 35 U.S.C. § 102(a)**

**1. “Machine Direction” and “Cross-Machine Direction” Are Properly Considered in Evaluating the Patentability of the Pending Claims**

Before the anticipation rejections can be properly addressed, Appellant addresses the meaning of the claim terms. “The first step of an anticipation analysis is claim construction.” *Helifix Ltd. v. Block-Lok, Ltd.*, 208 F.3d 1339, 1346, 54 U.S.P.Q.2d 1299, 1303 (Fed. Cir. 2000). As already discussed above, rejected independent claims 80 and 84 recite, *inter alia*, “providing a single-ply paper web having a machine direction and a cross-machine direction, wherein a longitudinal dimension is in the machine direction and a transverse dimension is in the cross-machine direction.” The Office has asserted that Appellant has failed to distinguish the “machine direction” from the “cross-machine direction” and, thus, has not considered those recitations in the patentability of the pending claims. See Final Office Action dated March 28, 2007, at § 9. As such, the Office ignored those recitations as part of its anticipation analysis under 35 U.S.C. § 102(b). *Id.* Appellant respectfully disagrees and asserts that the proper construction of the pending claims leads to consideration of the terms “machine direction” and “cross-machine direction” that cannot be ignored for patentability.

In contrast to the Examiner’s assertion, the claim terms “machine direction” and “cross-machine direction,” as used in the pending claims, are clearly defined and definite. See *infra* at § VII(A)(1). In particular, in view of the instant specification and the knowledge of one of ordinary skill in the art, the skilled artisan would immediately know that the “machine direction,” as used in the instant claims, refers to the transporting direction of the paper web as it was formed and travelled on a paper-

making machine, and the “cross-machine direction” refers to the transverse or 90° of the machine direction. In fact, as would be readily known to one of ordinary skill in the art, any web formed on a paper-making machine will inherently have a “machine direction” and a “cross-machine direction.” Although the Examiner asserts that not all paper napkins necessarily have a “machine direction” and a “cross-machine direction” (for example, paper napkins that have been formed by hand without the aid of a paper-making machine), the present claims explicitly recite “providing a single-ply paper web having a machine direction and a cross-machine direction.” Even if some paper napkins may not inherently contain a machine direction and a cross-machine direction, the subject matter of the pending claims has explicitly been limited to napkins formed from webs that do in fact possess those attributes.

Ultimately, the Office appears to assert that the pending claims are unduly broad or unclear because they recite “wherein a longitudinal dimension is in the machine direction and a transverse dimension is in the cross-machine direction.” The Office seems to believe that those properties are not necessarily inherent characteristics of all paper napkins, no matter how high the probability or certainty that they are. See Final Office Action dated March 28, 2007, at § 9. However, the pending claims do not simply recite a method of making “any paper napkin,” but instead recite a method of making a paper napkin comprising, *inter alia*, the step of “providing a single-ply paper web having a machine direction and a cross machine direction.” Therefore, the later recitation that the longitudinal dimension be in the machine direction and the transverse dimension is in the cross-machine direction is not overly broad or unclear. The fact that it may be possible to produce paper webs that do not contain a machine direction and a cross-

machine direction (such as by hand) does not effect the clarity of the subject matter recited in the pending claims, nor make them unduly broad.

The recitations of “machine direction” and “cross-machine direction” are substantive provisions that assist in defining the claimed inventions and helping to elucidate their patentability over the prior art. Therefore, those terms cannot be properly ignored in construction of the pending claims for analysis under 35 U.S.C. § 102.

## **2. Rejection over Lazar**

Claims 80, 81, 84, 86, and 90 (in Groups I and II) stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Lazar. According to the Office, “Lazar discloses a method of making a paper napkin comprising providing a single ply web with a longitudinal to transverse aspect ratio of about 2 to 1; folding one free edge towards the other edge to create two panels 3 and 4; folding the transverse fold 2 towards the free edge for a four paneled web;...[wherein] the panels have approximately equal areas.” See Final Office Action dated March 28, 2007, at § 4. Appellant respectfully disagrees that any disclosure of Lazar anticipates or renders obvious the rejected claims.

### ***a. Identity of Elements—the Touchstone of Anticipation—Is Lacking in the Rejection over Lazar***

After the claims have been construed, the second part of an anticipation analysis requires determining whether each of the claim limitations, as properly interpreted, has been disclosed by the prior art. See *TI Gp. Automotive Sys. (N. Am.), Inc. v. VDO N. Am., L.L.C.*, 375 F.3d 1126, 1139, 71 U.S.P.Q.2d 1328, 1338 (Fed. Cir. 2004). In particular, the well-known test for anticipation requires that a single reference disclose, either expressly or inherently, each and every element of the pending claims. See

*Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 347 F.3d 1367, 1372, 68 U.S.P.Q.2d 1857,1861 (Fed. Cir. 2003). That same reference, with identity of all of the elements, must also “enable one of skill in the field of invention to make and use the claimed invention” (*id.*) and thereby “describe the claimed invention with sufficient precision and detail to establish that the subject matter existed in the prior art” (*Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1121, 66, U.S.P.Q.2d 1051, 1054 (Fed. Cir. 2002)). Those requirements are embodied in the often-quoted, succinct test for anticipation endorsed long ago by the U.S. Supreme Court: “That which infringes, if later, would anticipate, if earlier.” *Peters v. Active Mfg. Co.*, 129 U.S. 530, 537 (1889).

With those requirements in mind, Appellant believes that Lazar clearly cannot meet any test for anticipation of the rejected claims. First, Lazar does not teach a method of making a single-ply paper napkin product, but instead appears to teach only methods of making paper towel products. Second, Lazar does not teach any method of making a paper web “wherein the longitudinal dimension is at least about two times the transverse dimension.” Third, Lazar does not teach or suggest a method of making a single-ply napkin product wherein the longitudinal dimension is in the machine direction and, therefore, at least one transverse fold is also in the machine direction.

***b. Lazar Does Not Teach Methods of Making Paper Napkin Products***

Lazar does not teach a method of making a paper napkin product, but instead teaches a method of making a much different paper towel product. *See, e.g.*, 1:9-32. Paper napkins generally present specific considerations that are very different from other paper products, such as towels. In general, napkin products, and particularly single-use dispenser napkins, tend to be lighter weight, softer, more absorbent, and less

strong than paper towel products. Thus, napkin products and paper towels are not necessarily interchangeable. While it may have been known to produce some forms of paper products in a single-ply format (such as thicker, stronger, webbed paper towel products), the state of the art for napkins had not previously been the production of a single-ply product with only transverse folds in the machine direction. There existed a need for a paper napkin product which used less material, and was therefore less expensive and more economical to produce, and which provided the same benefits to the end use consumer as multi-ply napkin products or napkin products with both transverse and longitudinal folds.

In an attempt to reduce the amount of necessary material, manufacturers resorted to the solution of reducing the size of the front panel of a folded napkin by using an off-fold in the transverse direction. In some cases, napkins may have had off-folds in the longitudinal directions as well. That napkin configuration has become an industry standard, but also has significant packaging problems of both reduced stackability and uneven strength at the two ends of the product. Paper towels, because of their generally increased strength and other properties, have different problems and the skilled artisan would not have recognized the two products to be interchangeable.

The single-ply napkins without longitudinal folds in the cross-machine direction of the present invention help solve many of the packaging problems associated with prior art off-fold napkins. These single-ply napkins are also more economical to manufacture than multi-ply napkins or single-ply napkins having longitudinal folds, for instance because: (1) a plurality of web plies do not have to be mated together, (2) the napkin web does not have to be turned for folding in the longitudinal and transverse directions,

(3) paper machines generally have higher net productivity when producing heavier weight substrates, and (4) due to their improved packaging attributes, they cost less to ship and take less storage space. Single-ply napkins having no longitudinal folds in the cross-machine direction are also advantageous because the total amount of web material, and thus total napkin size and weight, is reduced as compared to the conventional configurations that these napkins may replace. Thus, from a quick service restaurant proprietor's perspective, single-ply napkins having no longitudinal folds in the cross-machine direction are highly desirous.

As explained above, Lazar does not teach such a method of making a single-ply napkin product as recited by the pending claims, but instead teaches a method of making a much different paper towel product. Paper towels are well known to the skilled artisan to have separate attributes not necessarily congruent with those of paper napkins. Therefore, Lazar cannot anticipate the pending claims and Appellant respectfully request that the rejection be withdrawn.

***c. Lazar Does Not Teach A Method of Making a Napkin Product  
“Wherein the Longitudinal Dimension Is At Least About Two  
Times the Transverse Dimension”***

Not only does Lazar fail to teach any method of making a single-ply napkin product, but it also fails to teach a method of making a paper web “wherein the longitudinal dimension is at least about two times the transverse dimension,” as recited in the pending claims. In particular, Lazar does not teach or disclose anything at all about the ratio of the longitudinal dimension to the transverse dimension of its paper towel product. However, if the drawings are scaled, they reveal that the ratio of the longitudinal dimension to transverse dimension is about 1.6—not “at least about two” as

recited in the pending claims. See Figures 4-7. However, in any event, even if the figures had taught the dimensions as recited in the pending claims, it is well established that, “when the reference does not disclose that the drawings are to scale and is silent as to dimensions [as is Lazar], arguments based on measurement of the drawing features are of little value.” See MPEP § 2125.<sup>4</sup> Therefore, Lazar does not anticipate the pending claims and Appellant respectfully request that the rejection be withdrawn.

**d. Lazar Does Not Teach a Method of Making a Napkin Product Wherein the Napkin Contains No Longitudinal Folds in the Cross-Machine Direction and at Least One Transverse Fold in the Machine Direction**

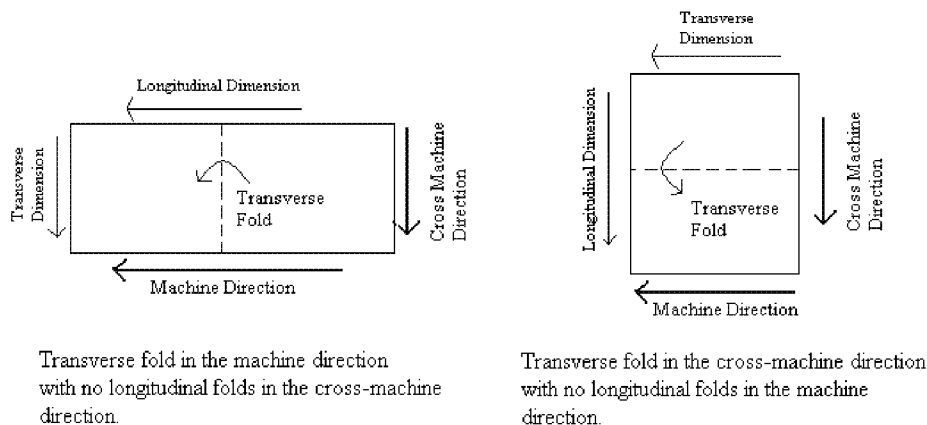
Not only does Lazar fail to teach a method of making a single-ply napkin product or a paper web “wherein the longitudinal dimension is at least about two times the transverse dimension,” but it also fails to teach a method of making a single-ply napkin product wherein “a transverse dimension is in the cross-machine direction” and wherein the napkin contains at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction. In particular, pending independent claim 80 recites, *inter alia*, “providing a single-ply paper web having a machine direction and a cross machine direction, wherein a longitudinal dimension is in the machine direction and a transverse dimension is in the cross-machine direction, and . . . wherein the napkin contains no longitudinal fold and at least one transverse fold.” Similarly,

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<sup>4</sup> See also *Nystrom v. Trex Co.*, 374 F.3d 1105, 1117 (Fed. Cir. 2004) (“the speculative modeling premised on unstated assumptions in prior art patent drawings cannot be the basis for challenging the validity of claims reciting specific dimensions not disclosed directly in such prior art”); *In re Wright*, 569 F.2d 1124, 1127 (C.C.P.A. 1977) (“[a]bsent any written description in the specification of quantitative values, arguments based on measurement of a drawing are of little value”).

independent claim 84 recites, *inter alia*, “providing a single-ply paper web having a machine direction and a cross machine direction, wherein a longitudinal dimension is in the machine direction and a transverse dimension is in the cross-machine direction, and . . . wherein the napkin contains no longitudinal fold and at least two transverse folds.” Therefore, in view of those recitations, the single-ply paper napkins according to the pending claims contain at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction.

Lazar does not disclose, either explicitly or inherently, any method of folding according to the pending claims. As explained in detail in Appellant’s interview with the Office on July 11, 2006, and as apparently agreed to by the Office in that interview, Lazar teaches only a method of making a paper towel product with transverse folds in the cross-machine direction—not the machine direction, as recited in the pending claims. As explained above, the particular folding methods according to the presently claimed invention provide unexpected advantages over those of the prior art, including increased efficiency and decreased costs. Differences between the two folding structures may be depicted as follows:





In particular, Lazar's method of making a folded paper product includes interleaving a number of sheets simultaneously. See 1:104 to 2:2. One of ordinary skill in the art would understand that disclosure to signify a "Christmas Tree" device, wherein a large number of basesheets are passed over forming plows to form a large number of rolls. The skilled artisan also understands that the Christmas Tree process of Lazar results in transverse folds in the cross-machine direction, not in the machine-direction as in the pending claims. The Office has not pointed to any disclosure within Lazar or any other knowledge available to those of ordinary skill in the art that would change that teaching, which clearly does not result in the methods of the pending claims.

Because Lazar does not teach either a method of making a single-ply paper napkin product, a method of making a paper web "wherein the longitudinal dimension is at least about two times the transverse dimension," or a method of making a single-ply napkin product wherein the longitudinal dimension is in the machine direction and at least one transverse fold in the machine direction, it cannot anticipate the pending claims. Therefore, Appellant respectfully requests that the rejection under 35 U.S.C. §102(b) over Lazar be withdrawn.

### **3. Rejection over Chan**

Claims 84, 85, and 88 (in Group II) stand rejected under 25 U.S.C. § 102(b) as anticipated by Chan. According to the Office, "Chan discloses a method of folding a web by folding one transverse free edge toward the other free edge creating a fold line and subsequently folding the fold line toward the transverse free edge creating another fold line and three panels." Final Office Action dated March 28, 2007, at § 5.

Like Lazar, Chan cannot meet any test for anticipation of the pending claims. First, Chan does not teach a method of making a paper web “wherein the longitudinal dimension is at least about two times the transverse dimension.” Second, Chan does not teach a method of making a single-ply napkin product wherein the longitudinal dimension is in the machine direction and therefore at least one transverse fold is also in the machine direction.

**a. Chan Does Not Teach A Method of Making a Napkin Product  
“Wherein the Longitudinal Dimension Is At Least About Two  
Times the Transverse Dimension”**

As does Lazar, Chan fails to teach a method of making a single-ply napkin product wherein the longitudinal dimension is at least about two times the transverse dimension. Nowhere does Chan discuss the ratio of a longitudinal to a transverse dimension, nor does it teach any reason why the skilled artisan might have been motivated to select an aspect ratio of at least about two. Moreover, while Chan's Figure 6 could be argued as showing a paper product with a longitudinal dimension that is at least about two times the transverse dimension, it is well settled law that, “when the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value.” See MPEP § 2125 (citing *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 U.S.P.Q.2d 1487, 1491 (Fed. Cir. 2000) (“[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.”)); see also *infra* n.4. Therefore, Chan cannot anticipate the pending claims and Appellant respectfully requests that the rejection be withdrawn.

***b. Chan Does Not Teach a Method of Making a Napkin Product Wherein the Napkin Contains No Longitudinal Folds in the Cross-Machine Direction and at Least One Transverse Fold in the Machine Direction***

As explained in detail in Appellant's interview with the Office on July 11, 2006, and as apparently agreed to by the Office in that interview, Chan also fails to teach a method of making a napkin product wherein "a transverse dimension is in the cross-machine direction" and wherein the napkin contains at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction. In fact, Chan contains no explicit teaching whatsoever regarding the dimension in its transverse folding occurs. One of ordinary skill in the art, in view of Chan's teachings, however, would clearly understand that the folding must result in a napkin product wherein all the folds are transverse folds in the cross-machine direction—not the machine direction, as in the pending claims. For this additional reason Chan cannot anticipate.

In particular, Chan discloses paper products with a relatively high number of folds, including four transverse folds with two folds being in the reverse direction. See Figures 4-7; 1:64 to 2:9. While such a folding configuration may be known to one of ordinary skill in the art to be readily accomplished by the use of forming plows (thus resulting in folds in the cross-machine direction), such a configuration would be extremely difficult, if not impossible, to accomplish using conventional techniques such as vacuum roll folders that would result in folds in the claimed machine direction.

In particular, in order to form folds in the machine using a vacuum roll folder, the folder would require at least five vacuum rolls. Yet conventional vacuum roll folders known in the industry only comprise three vacuum rolls. In fact, Appellant is not

presently aware of any vacuum roll folders on the market that contain the necessary number of vacuum rolls. Moreover, even if such a folder were available, the folding configuration of Chan would still be extremely difficult, if not impossible, to form with only transverse folds in the machine direction. Specifically, one of ordinary skill in the art would recognize that it would be extremely difficult to form Chan's required reverse fold that would hold shape as it passed between rolls without the use of at least one longitudinal fold in the cross-machine direction to stiffen and support the web. However, Chan does not contain such a longitudinal fold or indeed any mixture of transverse folds and longitudinal folds—all of its folds are only transverse folds in the machine direction.

In short, the complicated and unique folding configuration of Chan cannot result in no longitudinal folds in the machine direction and at least two transverse folds in the cross-machine direction, as recited in independent claim 84. The skilled artisan would also immediately recognize that Chan's method necessarily results in a method that includes only transverse folds in the cross-machine direction and no folds in the machine direction. Indeed, Chan teaches nothing to the contrary and certainly not with any disclosure sufficient to enable one of skill in the art to achieve the method of the pending claims. See MPEP § 2121.01. Because Chan fails to teach at least a method of making a paper web "wherein the longitudinal dimension is at least about two times the transverse dimension" or a method of making a single-ply napkin product wherein the longitudinal dimension is in the machine direction and therefore at least one transverse fold is also in the machine direction, the reference cannot anticipate claims 84, 85, and 88 and Appellant respectfully requests that the rejection be withdrawn.

**C. Rejections Under 35 U.S.C. § 103(a)**

**1. The Test for Obviousness**

Recently, in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (April 30, 2007), the Supreme Court reaffirmed the long standing test for obviousness set out in *Graham v. John Deere Co.*, 86 S. Ct. 684, 148 U.S.P.Q. 459 (1966). *Graham* set out four factual inquiries that must be evaluated in making a determination of obviousness or unobviousness under 35 U.S.C. § 103:

- (1) Determining the scope and content of the prior art;
- (2) Ascertaining the difference between the prior art and the claims in issue;
- (3) Resolving the level of ordinary skill in the pertinent art; and
- (4) Evaluating evidence of secondary considerations.

See *id.* at 694, 148 U.S.P.Q. at 467. In reaffirming that test, the *KSR* Court stated that “while the sequence of these questions might be reordered in any particular case, the factors continue to define the inquiry that controls.” 127 S. Ct. at 1734, 82 U.S.P.Q.2d at 1388.

The *KSR* Court also addressed the Federal Circuit’s long standing “teaching, suggestion, or motivation” test and recognized that a showing of teaching, suggestion, or motivation could provide “helpful insight” in determining whether the claimed subject matter is obvious under Section 103(a). *Id.* at 1741, 82 U.S.P.Q.2d at 1396. In particular, the Court stated:

Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not

all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

*Id.* The Court further went on to state that “[t]o facilitate review, this analysis [of whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue] should be made explicit.” *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”)).

Following the *KSR* decision, the Office issued a memorandum to its Technology Center Directors on May 3, 2007, indicating that “in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.”

Thus, in order to satisfy the initial burden of establishing a *prima facie* case of obviousness, the Office must first show that the prior art references or the knowledge commonly available to the skilled artisan teach or suggest all the claim limitations. See *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). The Office must also explicitly show that there would have been some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references in an effort to achieve the claimed subject matter. See *In re Rouffet*, 149 F.3d 1350, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998). Finally, the Office must show that one of ordinary skill in the art would have had a reasonable expectation of success in making the asserted modification or combination

to achieve the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); *see also* MPEP § 2143.

As discussed in further detail below, none of those criteria are met with regards to any of the pending claims by either the combination of Lazar in view of Appellant's supposed admitted prior art or by Ito. Therefore, proper *prima facie* obviousness rejections cannot rest on those references and the rejections should be withdrawn.

**2. Rejection Over Lazar in View of the Appellant's Supposed Admitted Prior Art**

Claims 82-83 and 87 (in Groups I and II) stand rejected under 25 U.S.C. § 103(a) as obvious over Lazar in view of Appellant's supposed admitted prior art ("APA"). The Office admits that Lazar does not disclose a method of making a single-ply napkin with either the claimed ranges of longitudinal dimensions or the claimed basis weight. See Final Office Action dated March 28, 2007, at § 7. However, the Office asserts that "it would have been obvious to one of ordinary skill in the art to apply the folding method of Lazar to various sizes and weights of webs including those of claims 82 and 87." *Id.* The Office further states that "the previously made common knowledge modification is taken to be prior art because applicant failed to traverse the examiner's assertion of official notice." *Id.* Appellant respectfully traverses this rejection.

First, Appellant specifically traversed the Office's assertion of Official Notice in at least the Reply to Office Action dated October 6, 2005, on pages 10-11, and thus denies any admission of the Office's asserted "common knowledge modification." Second, regardless of the status of the traversal, that supposed APA does not remedy any of the deficiencies of Lazar noted above and, therefore, the combination of

references does not support a proper *prima facie* case of obviousness. In particular, even in view of the supposed APA, the Office has not presented any proper *prima facie* evidence that the skilled artisan would have been motivated or would have found it desirable to make a single-ply napkin product wherein “a transverse dimension is in the cross-machine direction” and wherein the napkin contains at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction.

***a. Appellant Specifically Traversed the Examiner’s Assertion of Official Notice and Denies Admission of the Asserted Prior Art***

Although the Office asserts that the pending claims 82, 83, and 87 are obvious under 35 U.S.C. § 103(a) over Lazar in view of “Applicant’s Admitted Prior Art,” Appellant specifically traversed the Office assertion of Official Notice and, thus, denies admission of the asserted prior art. In particular, in the Office Action dated June 23, 2005, the Office alleged Official Notice that it would have been obvious to one of ordinary skill in the art to apply the folding method of Lazar to various sizes and weights of webs, including those of claims 82 and 87. See Office Action dated June 23, 2005, at § 9. However, Appellant provided a proper traverse of the Official Notice in at least the Reply to Office Action dated October 6, 2005, on pages 10-11. Therefore, the APA has not been admitted by Appellant and the Office cannot rely on that supposed prior art without fully explaining and providing a basis for the assertion that the subject matter is in fact in the prior art. See MPEP § 2144.03.

***b. Even in View of the Supposed Admitted Prior Art, Lazar Still Fails to Render Obvious the Pending Claims***

Regardless of its status, the supposed APA— that the skilled artisan would have known that the folding method of Lazar could be applied to webs of various sizes and



weights, including those recited in claims 82 and 87—still does not remedy any of the defects of Lazar discussed above. In particular, Lazar, in view of the supposed admitted prior art, still does not teach either a method of making a single-ply napkin product, or a method wherein “a transverse dimension is in the cross-machine direction” and wherein the napkin contains at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction.

Moreover, neither Lazar nor the supposed APA would have provided the skilled artisan with any motivation to make a single-ply napkin product wherein the napkin contains at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction, at least not with any reasonable expectation of success. As explained above, Lazar is directed to a paper towel product that is well-known to the skilled artisan to be different in character, use, and manufacturing process than napkins. Furthermore, Lazar only teaches products in which the transverse folds are in the cross-machine direction. The supposed admitted prior art does not remedy those problems, nor does the Office assert that it does.

The Office has failed to articulate any reasoning at all why one of ordinary skill in the art, in view of any of the references of record or any common knowledge, would have had any motivation to make the claimed single-ply napkin product containing at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction. Such articulated reasoning is required by 35 U.S.C. § 103(a). See *KSR*, 86 S. Ct. at 1741, 148 U.S.P.Q. at 1396 (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of

obviousness.”) (citation omitted). Instead, the Office has continued to rely the assertion that the terms “machine direction” and “cross-machine direction” are not clearly defined in an effort to apply Lazar to the pending claims. However, as demonstrated above, those terms are clearly defined and must be given appropriate consideration in the evaluation of the patentability of the pending claims.

Therefore, even if the skilled artisan would have been motivated to combine the teachings of Lazar with the supposed APA, each of the limitations of the pending claims would still not be taught and the subject matter of the pending claims would not have been achieved. Neither the supposed APA nor any other reference of record, either alone or in any combination, would have suggested the desirability of or provided any motivation to achieve the subject matter of claims 82, 83, and 87. Thus, the Office has failed to establish a *prima facie* case of obviousness and the Appellant respectfully submits that the rejection should be withdrawn.

### **3. Rejection over Ito**

Claims 84, 85, 88, and 89 (in Group II) stand rejected under 35 U.S.C. § 103(a) over Ito. The Office asserts that “Ito describes forming transverse folds in a web in order to produce wipes. The invention contemplates multiple fold configurations as well as materials.” See Final Office Action dated March 28, 2007, at § 8. However, the Examiner admits that “Ito does not directly disclose the use of a single-ply paper web (rather a four-ply for added strength)” *Id.* In order to remedy this defect, the Examiner states that “it would have been obvious to one of ordinary skill in the art to use the method for a single-ply if desired; [as] applicant has not disclosed that a single-ply

paper web provides an advantage, is used for a particular purpose, or solves a stated problem.” *Id.* Appellants respectfully traverse this rejection.

Ito fails to render the pending claims obvious at least because it does not teach or suggest a method of making a single-ply product, let alone a napkin product, nor does it teach or suggest a method of making a product wherein the longitudinal dimension is at least about two times the transverse dimension. Moreover, the Office has failed to show why one of ordinary skill in the art would have had any motivation to modify its teachings to achieve such a product, let alone with a reasonable expectation of success.

***a. Ito Does Not Teach or Suggest a Method of Making a Single-Ply Napkin Product***

As admitted by the Office, Ito fails to teach or suggest a single-ply product, let alone a napkin product. Instead, Ito is directed to a very different four-ply industrial size shop wiper. See 1:6-16; 2:62-66. As explained above, napkins present specific considerations that are very different from other paper products, such as towels or wipers. In general, napkin products, and particularly single-use dispenser napkins, tend to be lighter weight, softer, more absorbent, and less strong than towels or wipers.

Moreover, one of ordinary skill in the art would not have been motivated to modify the four-ply industrial size shop wiper of Ito to achieve a single-ply product. In particular, the conversion of the four-ply product of Ito to a single-ply product would severely weaken the structure of Ito and render it unsuitable for its intended purpose. As is well established, a proposed modification is improper if it would render the prior art unsatisfactory for its intended purpose. See MPEP § 2143.01(V). The skilled artisan

would be readily aware that four-ply products are usually stronger and have other vastly different characteristics from one-ply products. A one-ply shop wiper for Ito would be wholly unusable and the skilled artisan would not have made the Office's modification.

Finally, the Office's position that Appellant has not acknowledged the benefits of a one-ply structure is not well-taken. This Appeal Brief, Appellant's prior responses during examination, and the original specification are replete with descriptions of the benefits of one-ply structures for napkin products. See *infra* § VII(A); specification at 5:6-15; 6:11 to 8:2. Ito does not contemplate any problems with dispenser napkins or the solutions associated with the claimed inventions. The skilled artisan simply would not have been motivated or found it desirable to modify Ito in ways necessary to achieve the claimed inventions, nor could the skilled artisan have predicted the results of such a modification. Ito cannot support a *prima facie* case of obviousness.

***b. Ito Does Not Teach or Suggest a Method of Making a Single-Ply Napkin Product with a Longitudinal Dimension of at Least About Two Times the Transverse Dimension***

Not only does Ito fail to teach or suggest a method of making a single-ply napkin product, but it also fails to teach or suggest a method of making a single-ply napkin product wherein the longitudinal dimension of at least about two times the transverse dimension. The structure and shape of the single-ply napkin products according to the pending claims have not been chosen at random, but instead have been particularly chosen to achieve a single-ply paper napkin that generally achieves good absorbency, strength, hand feel, and softness and that is generally less expensive to make than traditional napkin products. The single-ply nature of the napkin, in combination with the shape of the napkin and the direction of folding, help to achieve those attributes.

In contrast, the product of Ito is not single-ply, nor does it have a longitudinal dimension of at least about two times the transverse dimension. See 2:63-64 and 3:10-14. Given the extreme differences between the industrial-sized shop wiper product of Ito and the single-ply napkin products of the pending claims, one of ordinary skill in the art would have had no motivation to modify the Ito product from a four-ply product to a single-ply product, in addition to providing the dimensions recited by the pending claims. The Office has not shown any evidence that the skilled artisan would have made such a modification or that any such modification could have yielded predictable results or would have had a reasonable expectation of success. Therefore, Ito cannot properly render the claims obvious under 35 U.S.C. § 103(a) and Appellant requests that the rejection be withdrawn.

#### **D. Conclusion**

The recited claim terms are sufficiently definite for purposes of 35 U.S.C. § 112, second paragraph, and the terms “machine direction” and “cross-machine direction” must be given patentable weight. In light of those findings, the Office has not presented a proper case of anticipation of any of the Group I or II claims over either Lazar or Chan. The Office also has not presented a proper *prima facie* case of obviousness of any of Group I or II claims with regards to either Ito or Lazar in view of Appellant’s supposed APA. In particular, the Examiner has failed to show that the references of record, when taken in any combination or in view of the knowledge of one of ordinary skill in the art, would have anticipated rendered or rendered obvious the claimed methods. Therefore, Appellant respectfully requests that the rejections be withdrawn and the pending claims passed to allowance.

If the Board has any questions or problems regarding this application or this Appeal Brief, Appellant invites the Board to contact the undersigned representative to discuss an appropriate resolution.

If any further extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 41.20 that are not expressly authorized herewith, including any fees required for an extension of time under 37 C.F.R. §§ 1.136 and 1.17, please charge such fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: December 17, 2007

/Robert C. Stanley/  
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**VIII. Claims Appendix**

Claims 1-79 (canceled).

Claim 80 (Previously Presented): A method of making a paper napkin comprising:

(a) providing a single-ply paper web having a machine direction and a cross machine direction, wherein a longitudinal dimension is in the machine direction and a transverse dimension is in the cross-machine direction, and wherein the longitudinal dimension is at least about two times the transverse dimension;

(b) optionally orienting the web for longitudinal folding in the machine direction; and

(c) folding one transverse free edge of the single-ply paper web toward the other transverse free edge to create two panels in the single-ply paper web;

wherein the napkin contains no longitudinal fold and at least one transverse fold.

Claim 81 (Original): The method according to claim 80, wherein the two panels have approximately equal areas.

Claim 82 (Original): The method according to claim 80, wherein the single-ply paper web provided has a longitudinal dimension ranging from about 9½ inches to about 13½ inches, and a basis weight of at least about 13 lbs/3000 sq ft ream.

Claim 83 (Original): The method according to claim 82, wherein the two panels have approximately equal areas.

Claim 84 (Previously Presented): A method of making a paper napkin comprising:

(a) providing a single-ply paper web having a machine direction and a cross machine direction, wherein a longitudinal dimension is in the machine direction and a transverse dimension is in the cross-machine direction, and wherein the longitudinal dimension is at least about two times the transverse dimension;

(b) optionally orienting the web for longitudinal folding in the machine direction;

(c) first folding one transverse free edge of the single-ply paper web toward the other transverse free edge to create a transverse fold line dividing the longitudinal dimension of the single-ply paper web, and

(d) subsequently folding the first transverse fold line toward the transverse free edge to create at least one additional transverse fold line on the single-ply paper web;

wherein the napkin contains no longitudinal fold and at least two transverse folds.

Claim 85 (Original): The method according to claim 84, wherein three panels are formed on the single-ply paper web.



Claim 86 (Original): The method according to claim<sup>5</sup> 84, wherein four panels are formed on the single-ply paper web.

Claim 87 (Original): The method according to claim 84, wherein the single-ply paper web provided has a longitudinal dimension ranging from about 11½ inches to about 17½ inches, and a basis weight of at least about 16 lbs/3000 sq ft ream.

Claim 88 (Original): The method according to claim 85, wherein the two panels adjacent to the first transverse fold line are approximately equal in area.

Claim 89 (Original): The method according to claim 85, wherein the two panels adjacent to the transverse free edges of the single-ply web are approximately equal in area.

Claim 90 (Previously Presented): The method according to claim 86, wherein the four panels formed on the single-ply paper web are approximately equal in area.

Claims 91-93 (Canceled).

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<sup>5</sup> Appellant notes that this typographical error of the word “claim” appears in the claims as presently pending and should not affect any issues in this appeal.

**IX. Evidence Appendix**

<<NONE>>

**X. Related Proceedings Appendix**

<<NONE>>